



HYBRID ENERGY SOLUTIONS

Commercial | Industrial | Residential

MPMC GROUP OF COMPANIES



www.mpmc-china.com



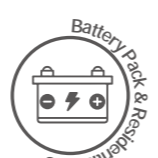
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MPMC POWERTECH CORP.

Global leader in distributed solar hybrid solutions & off-grid systems



120 Countries

Products are exported to 120 countries



52 Types

Three categories of 52 types of products



12000 Sets

Annual production capacity



50 Specialists

50 solution experts focused on different applications



107 Patents

6 invention patents, 91 utility model patents, 8 software copyrights and 2 appearance patents.

With lower carbon, greener, more reliable and more intelligent customized solutions .

MPMC POWERTECH CORP. (stock code: 832266) was established in Pudong New Area, Shanghai, 2008. As the global leader in distributed solar hybrid solutions & off-grid systems, MPMC focus on independent research & development, full process intelligent manufacturing, and global marketing & service, committed to high quality development and high-end brand positioning. MPMC produces and sells intelligent emergency generator sets, mobile hybrid energy lighting towers, hybrid energy power stations and lithium-ion battery energy storage solutions. Currently, MPMC's products have been exported to more than 120 countries and regions, and it has in-depth cooperation with more than 60 dealers which covers the Americas, Europe, Oceania, Africa, the Middle East, Southeast Asia and the Commonwealth of Independent States. In addition, MPMC has established holding subsidiaries or offices in overseas countries such as US, UAE and South Africa. MPMC has a professional team composed of industry experts and senior engineers, and has established a joint laboratory of distributed hybrid energy cloud technology in cooperation with Tongji University. By using the independently developed intelligent energy management cloud platform "More Power Cloud", the laboratory is committed to conducting technical research on global hybrid energy micro grid cloud management. MPMC aims to become the global leader in hybrid energy power solutions and provide customers around the world with lower carbon, greener, more reliable and more intelligent customized solutions .

MPMC has been developed wind, solar, diesel generator and battery powered hybrid energy products since 2019, and established the holding and wholly-owned subsidiaries, SEMOOKII BESS CO., LTD. and MPMC Energy Jiangsu in 2021. By optimizing the combination of multiple energy and storage systems, MPMC provides customers with distributed hybrid energy solutions, which cover a wide range of application areas, including mining, rental, telecom, oil and gas field, and construction site, etc. The new energy products include residential energy storage and charging, on&off grid industrial & commercial energy storage, solar, battery and diesel genset micro grid, off-grid systems and lithium iron battery packs' OEM/ODM, etc. MPMC currently has more than 280 employees and is accelerating its global industrial layout to continuously improving its digital intelligent manufacturing capability, innovative application of cutting-edge technologies in the industry and customer service experience. In the past five years, MPMC's business areas have continued to expand, started as the diesel generator sets supplier and now has become a group company providing diversified solutions, including wind, solar, diesel genset and hydrogen energy power units, energy storage systems and hybrid energy management, etc. With the expansion of business, MPMC's demand for digital and intelligent production facilities and equipment is also increasing. Currently, MPMC is building MPMC Energy Jiangsu in Yangzhong, Jiangsu Province and plans to start production in the fourth quarter of 2024.



CNAS L18681

Laboratory accreditation certificate

WMI

Certificate

Certificate of the World Manufacturer Identifier(WMI)Code



MPMC boasts of perfect quality control system



High quality products created under strict quality control system

Strict standard on product testing and process inspection is formulated to ensure product quality. From the moment when materials arrive in the workshop to the time for delivery, all the essential processes are under inspection and control by professional inspectors. Products with defects are not allowed to move to the next procedure unless the problems are well settled. Through complete quality control system, all-round control is performed over the aspects from design to production, from personnel to equipment, from process and material to the working site, so as to satisfy the requirements of customers.

In order to make sure that product performance and quality meet the demanding requirements of our customers, advanced testing center is established in MPMC for new product design and delivery inspection. The inspection contents are in line with ISO8528 standard and performance requirements in special industry and regions.



CE certificate



TLC certificate



ARCADIS certificate



ISO9001
Quality system certified



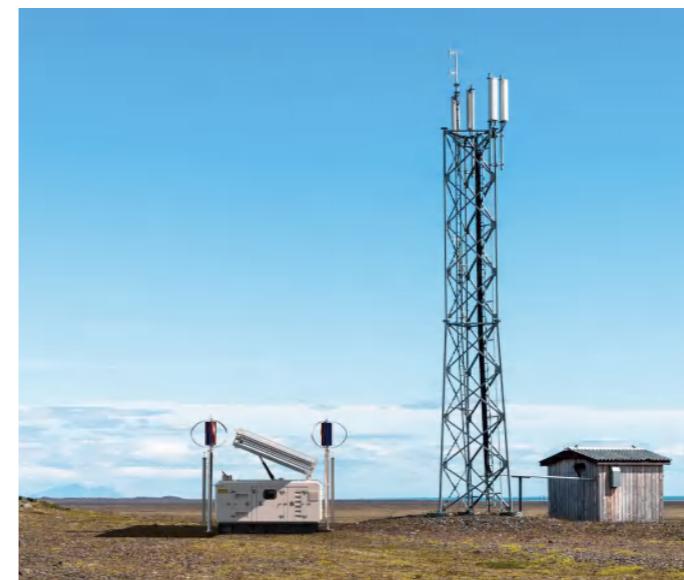
ISO14001
Quality system certified



ISO45001
Quality system certified

DEDICATION

Product Portfolio



Hybrid Power Stations



Power Bank & DG



Hybrid Microgrids



Hybrid Lighting Towers



High and low temperature environmental testing system



Noise measurement system



Safe electrical test system

MPMC HYBRID®

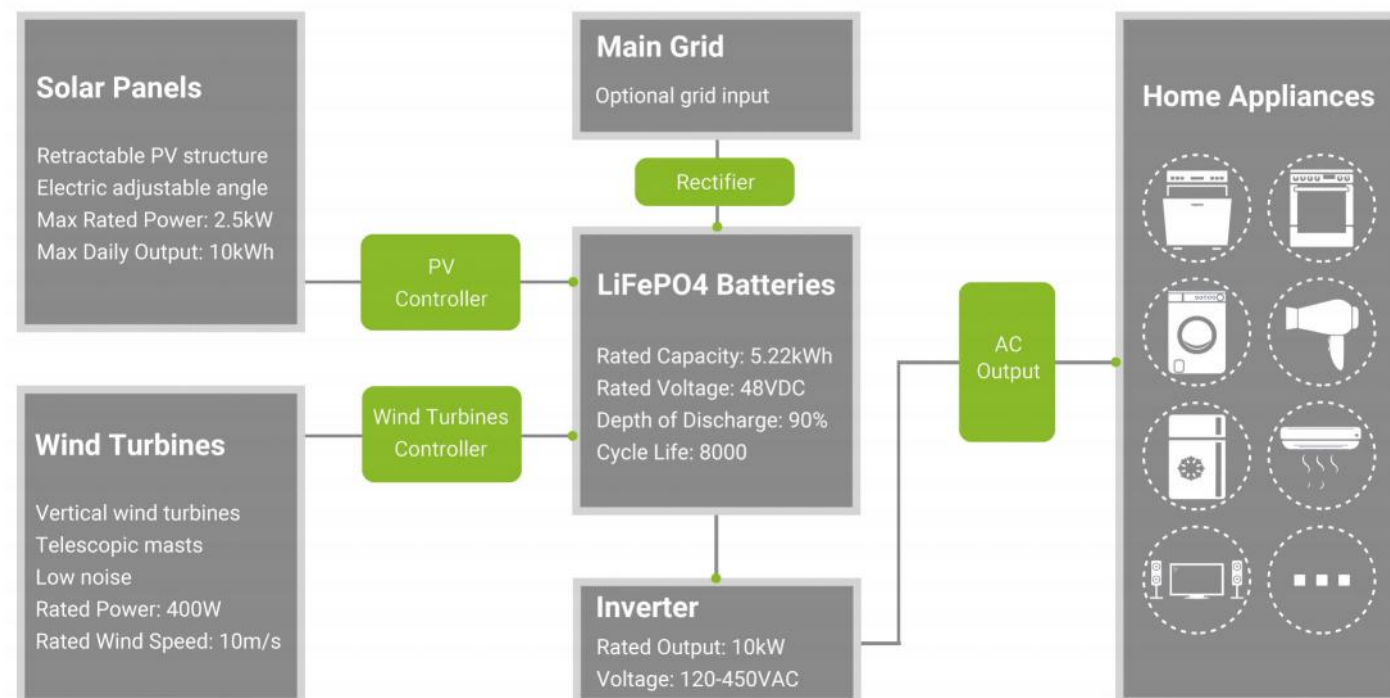
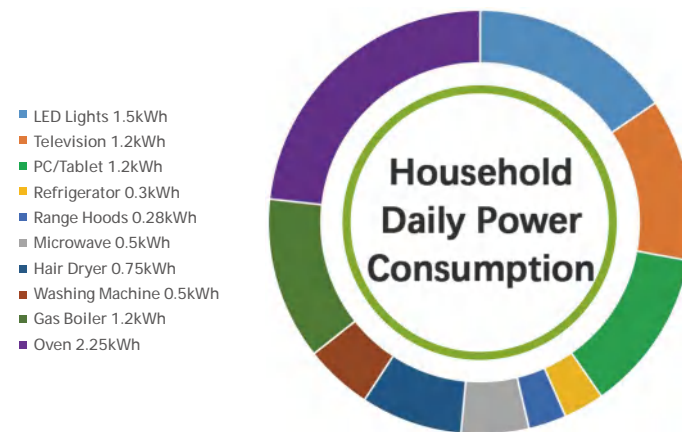
WSB / SB Series

Hybrid Solutions For Residential & Commercial Independent Power

By optimizing the integration of solar power, wind power, and energy storage systems, MPMC Hybrid Energy Solutions WSB / SB Series has lower costs than conventional solar & batteries storage systems on the market. MPMC WSB / SB Series have the advantages of free installation, inattentive operation & maintenance, and greatly shortening the investment return period.

The system ensures power supply at night and in remote areas without main grid, saving at least 3,600 kWh of electricity every year. By expanding the capacity, other than saving on electric bills, excess electricity can also be sold into the grid.

Based on a typical use of household electrical appliances and the shift to more energy - saving appliances, taking account of actual service time of each electrical appliance, the estimated daily household power consumption is 9.58kWh and peak power is about 5940W. And system capacity can be expanded according to requirements.



2021 Best Rechargeable Solar Battery Power Integration Project



Specification

*Customization available

				SB-8S	SB-10	WSB-8S	WSB-10
LFP Battery Energy Storage System @50Hz/60Hz	LFP Battery	Capacity kWh	Min.	10			
			Max.	30			
	HV/LV			LV			
	Hybrid Inverter	Model		MIV-8S	MIV-10	MIV-8S	MIV-10
kVA			8	10	8	10	
Phase			1	3	1	3	
Cooling System			Fan	Fan	Fan	Fan	
Solar Panel	Panel Power	W	460	460	460	460	
	Total Power	W	2300	2300	2300	2300	
Wind Turbine	Unit Rated Power	W	Not Included			400	400
	Total Power	W	Not Included			400	400
Dimensions	Loading	L*W*H(mm)	1380*1150*2550	1380*1150*2550	1750*1150*2550	1750*1150*2550	
	Loading Qty.	20GP	8	8	6	6	
		40HC	16	16	12	12	
	Expand	L*W*H(mm)	2400*5400*2530	2400*5400*2530	3900*5400*7000	3900*5400*7000	
Net.weight (kG)			1050	1100	1350	1400	

MPMC HYBRID®

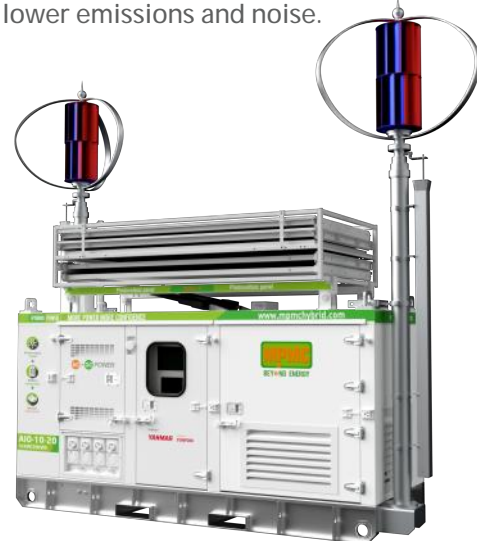
AIO Series

Hybrid Solutions ALL-IN-ONE Hybrid Power Station

MPMC Hybrid Power Station AIO® Series is an updated generation of GSB® Series. Compared with the hybrid generator set of GSB® Series, this ALL-IN-ONE hybrid genset consists of traditional diesel/gas generator set, solar panels, battery storage system as well as wind turbines. It helps us realizing solar self-consumption, rate arbitrage and more importantly, power independence with lower emissions and noise.

For daily power consumptions 20kWh per day, by adopting MPMC AIO® Series Hybrid Power Station as a 12-hours-usage electricity generation source, it might reduce the cost on fuel up to **\$4000 USD** per year, compared with a 24kW diesel generator sets.

*The cost of the fuel is for reference only.



This integrated hybrid energy system is mainly developed for independent off-grid power solutions such as telecom base station, island power supply, etc.

Taking full advantage of MPMC surface process technology and experience of manufacturing super silent canopied generator set, the noise of AIO® Series genset is under 10 dBA while running in hybrid mode and just 65 dBA@7m when the standby diesel generator is running.

Besides, as an integrated unit, it adopts a compact design for shipping so that at least four units can be delivered by a standard 40'HC container at the same time.

Key Features

1. Integrated installation, convenient storage and transportation.
2. High return on investment and quick return.
3. Simple operation and easy maintenance.
4. Power and capacity can be expanded, meet different user needs.
5. Excellent cooling system for heat dissipation.
6. Beautiful design, retractable structure, excellent anti-attenuation performance and high efficiency of MPMC solar powered system.
7. Visualized smart control system to monitor operation status.
8. Reliable lithium iron phosphate battery storage to ensure compact structure with high power density and long lifespan.
9. Accept customer customization, suitable for various scenarios.



Specification

*Customization available

MODEL			AIO-10	AIO-20		AIO-30
LFP Battery Energy Storage System @50Hz/60Hz	LFP Battery	Capacity kWh	10	20	50	30
		Min. Max.	40	40	60	60
	HV/LV		LV	LV		HV
	Hybrid Inverter	Model	MIV-10	MIV-10*2		MIV-30
kVA		10	20		30	
Phase		3	3		3	
Cooling System			Fan/HVAC	Fan/HVAC		HVAC
Generator Set @50Hz/60Hz	Rated Power (Prime@ISO 8528)	kW	16	16	24	16
		kVA	20	20	30	20
	Fuel Tank	L	100	200		200
Solar Panel	Panel Power	W	460	460		420
	Total Power	W	2300	2300		5040
Wind Turbine	Unit Rated Power	W	400	400		400
	Total Power	W	800	800		800
Dimensions	Loading	L*W*H(mm)	3400*1150*2500	3400*1150*2500	4450*1150*2500	3950*2280*2230
		20GP	N/A	N/A	N/A	1
	Loading Qty.	40HC	6	6	4	3
		Expand	L*W*H(mm)	4400*5500*7000	4400*5500*7000	4900*5500*7000
Net.weight (kG)			3400	3500	3600	3600

MPMC HYBRID®

GSB Series

Hybrid Solutions For Independent Power



Design Standard

MPMC Hybrid Power Station GSB® Series is a reliable resilient / prime energy solution mainly developed for independent power. To live green while ensuring stable off-grid power source, GSB® Series integrates diesel generator set (gas generator set for option), solar power, battery storage and hybrid solar inverter in one secure unit. It helps customers realizing solar self-consumption, rate arbitrage and more importantly, power independence.

Features

- Integrated installation, convenient storage and transportation.
- High return on investment and quick return.
- Simple operation and easy maintenance.
- Power and capacity can be expanded, meet different user needs.
- Excellent cooling system for heat dissipation.
- Beautiful design, retractable structure, excellent anti-attenuation performance and high efficiency of MPMC Solar Powered System.
- Visualized smart control system to monitor operation status.
- Reliable Lithium Iron Phosphate Battery Storage to ensure compact structure with high power density and long lifespan.
- Accept customer customization, suitable for various scenarios.



Specification

*Customization available

MODEL		GSB-10	GSB-20		GSB-30		
LFP Battery Energy Storage System @50Hz/60Hz	LFP Battery	Capacity	Min.	10	20	50	40
			Max.	40	40	60	60
	HV/LV		LV	LV		HV	
	Hybrid Inverter	Model	MIV-10	MIV-10*2		MIV-30	
kVA		10	20		30		
Phase		3	3		3		
Cooling System		Fan/HVAC	Fan/HVAC		Fan/HVAC		
Generator Set @50Hz/60Hz	Rated Power (Prime@ISO 8528)	kW	16	16	24	24	
		kVA	20	20	30	30	
	Fuel Tank	L	100	200		200	
Solar Panel	Panel Power	W	460	460		460	
	Total Power	W	2300	2300		2300	
Dimensions	Loading	L*W*H(mm)	2950*1150*2250	2950*1150*2250	3650*1150*2250	3650*1150*2250	
		20GP	4	4	2	1	
	Loading Qty.	40HC	8	8	6	3	
		Expand	L*W*H(mm)	2950*5500*3350	2950*5500*3350	3650*5500*3350	3650*5500*3350
Net.weight (kG)			3000	3100	3400	3400	

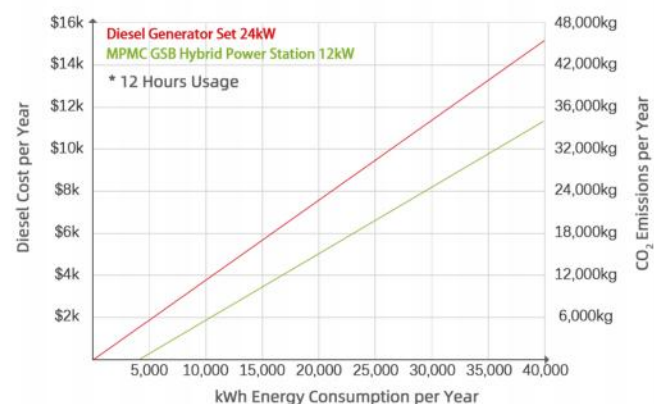
For household daily power consumption ≤15kWh per day, by adopting MPMC GSB® Series Hybrid Power Station as a 12-hours-usage electricity generation source, it costs only **\$119.29 USD** on fuel per year, while it costs \$2312 USD on fuel per year for a 24kW diesel generator sets.

Annual Fuel Cost Saving

Up to **\$4,519 USD / Set**

Annual Emission Saving

Up to **6,090 KG of CO₂ / Set**



MPMC HYBRID®

GB Series

Hybrid Solutions For Greener Power Solutions



Design Standard

GB® is a new range of secure integrated hybrid power station. With diesel generator, Battery storage and Hybrid solar Inverter in one secure unit for option. GB® is mainly developed for lower emission, Reduce the dependence on Main Power and decrease the consumption cost.

Benefits

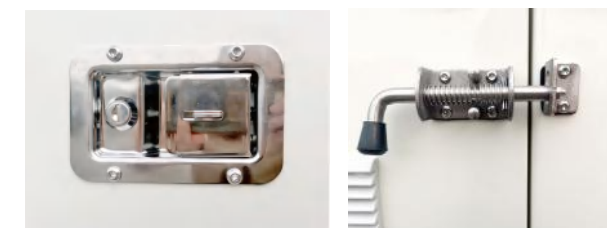
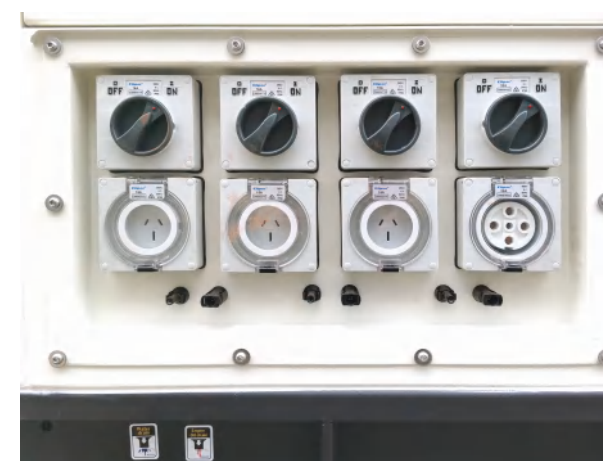
- Integrated installation, convenient storage and transportation;
- High return on investment and quick return;
- Simple operation and easy maintenance;
- Power and Capacity can be expanded, meet different user needs;
- Accept customer customization, suitable for various scenarios;

Warranty

- Battery Performance: 6000 cycles(80% DOD) or 3 years after manufacture;
- Generator: 18 months after manufacture or 1500 hours running time;



Why we need battery storage system that costs much more than the traditional genset providing the same power?



Specification

*Customization available

MODEL				GB-10	GB-20		GB-30
LFP Battery Energy Storage System @50Hz/60Hz	LFP Battery	Capacity kWh	Min.	10	20	50	40
			Max.	40	40	60	60
	HV/LV		LV	LV		HV	
	Hybrid Inverter	Model		MIV-10	MIV-10*2		MIV-30
kVA		10	20		30		
Phase		3	3		3		
Cooling System			Fan/HVAC	Fan/HVAC		Fan/HVAC	
Generator Set @50Hz/60Hz	Rated Power (Prime@ISO 8528)	kW	16	16	24	24	
		kVA	20	20	30	30	
	Fuel Tank	L	100	200		200	
Dimensions	Loading	L*W*H(mm)	2950*1150*1500	2950*1150*1500	3650*1150*1500	3650*1150*1500	
	Loading Qty.	20GP	4	4	2	2	
		40HC	8	8	6	6	
Net.weight (kG)			2300	2400	2500	2500	

MPMC HYBRID[®]

Hybrid Microgrids

Battery Energy Storage System + DG + Solar



Composition of typical hybrid microgrids



Battery Energy Storage System

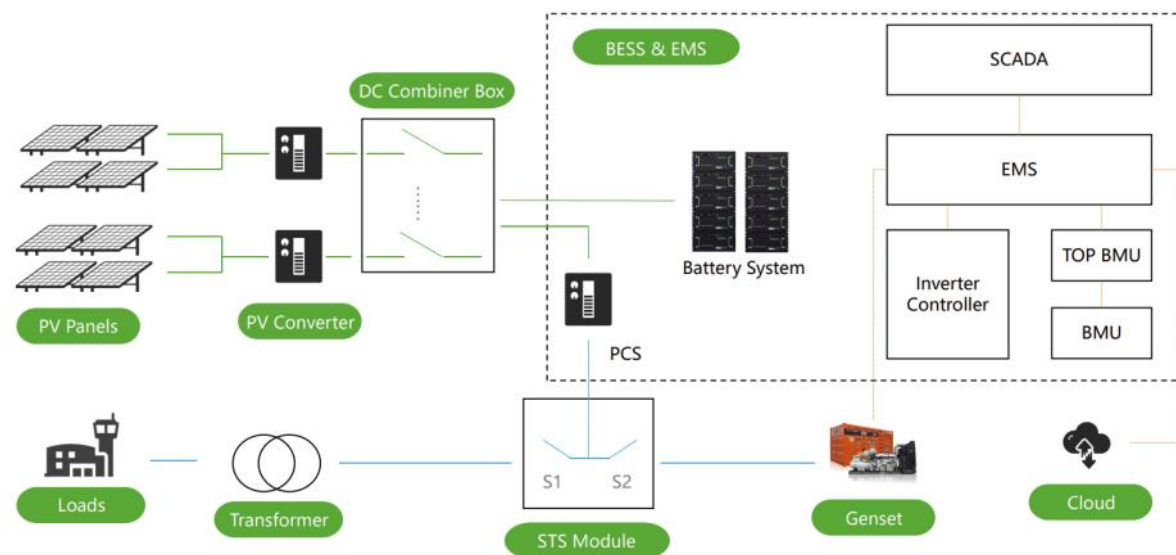


Solar Panel



Diesel Generator

System Diagram



Operation Logic

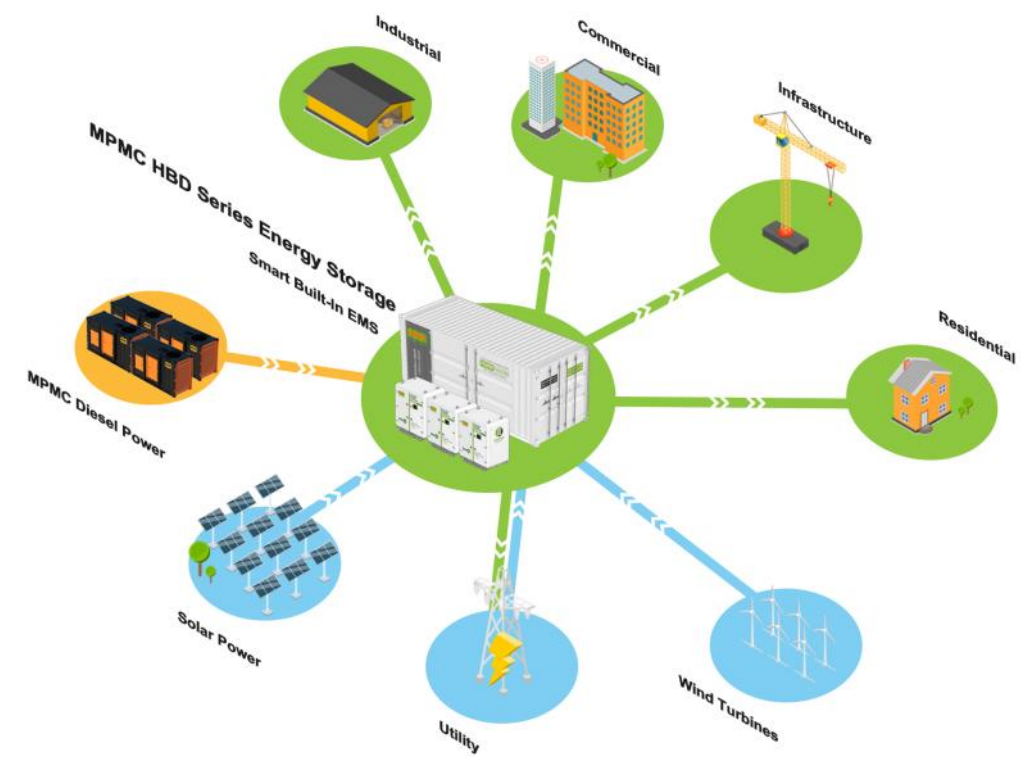
Basic Design: PV+BESS as prime power, diesel generators as backup power

With EMS and SCADA, the whole power plant realizes intelligent automatic management:

1. Stabilize the power supply by weather analyzing and forecasting, and adjust the power deployment.
2. Analyze and manage the loads, working state of PV and the BESS, to maximize fuel efficiency of diesel generators.
3. Independently and flexibly adjust the operating status and distribution of power generation and loads to maximize the operating efficiency;
4. Have the ability to form a large power grid with other micro grid (HV power grid / LV power grid). Each site can communicate with each other and the master system.



- Weather Forecast
- Realtime remote monitoring
- Remote Alarm & diagnosis
- Realtime reports
- SL3 network security
- StarLink for communication backup



SOLAR

LIGHTING TOWER

HSL Series

THE FULL AUTOMATIC SOLAR LIGHTING TOWERS IS EQUIPPED WITH 4×75W LAMPS / 4×112W LAMPS / 4×150W LAMPS.

ECO Friendly & Low Emission



DC
LED
LIGHTING TOWER

HYDRAULIC MAST HIGH STRENGTH

MAST UP TO 7.2M



Features:

Powerful design, Safe and reliable low-voltage operation system. These towable solar light towers can be used for any application where a diesel, gas or electric generator-powered light tower is needed.

- Can meet no mains and battery shortage environment.
- High performance LED lighting.
- Slided and folded solar panels, compact and green.
- The solar panel is controlled by the electric push rod.
- Convenient mains input and gasoline generator input interfaces.
- On-road trailer speed $\leq 80\text{km/h}$.
- The mast could be rotated horizontally by 0 - 355 degrees.

Options (With extra charge)

- Electric winch, vertical telescopic mast.
- Output plug is optional according to voltage, which can load a variety of electric equipment.
- Standby gasoline / diesel generator charge the battery when shortage.
- Equipped with 4G router and web camera, supporting the function of road monitoring.
- Settable Load Model (a. 24 hours working b. Working hours setting c. 8 hours working at night only)

- ◀ Solar panels can be adjustable tilt angle/fixed angle (Option)
- ◀ Solar panels can be slided and expanded

Technical data

Model	HSL-1380	HSL-1840	HSL-2760	HSL-3680	
Discharge Duration	hr.	30.0			
Self Charge Duration	hr.	7.5	5.5	5.5	5.5
Solar Panel	Wp	460			
	pcs	3	4	6	8
Control System	Automatic Control (Lamp / Solar / Battery)				
Lamp Power	W	75	112	150	
Luminous Efficiency	Lm/W	>200			
Lamp Qty.	pcs	4			
Luminous Flux of Lamp Array	Lm	62000	92000	124000	
Total Irradiation Area (Min ≥5lux, 7.2m Mast)	m ²	2000	3000	4000	
Battery Model	LFP MF51100				
Nominal Capacity	kWh	5.12			
	Ah	100			
Nominal Voltage	VDC	51.2			
Battery Qty. (PACK)	pcs	2	3	4	
Mast Lifting Type	Vertical				
Lifting Height	m	7.2			
Driving Type	Hydraulic				
Horizontal Rotation Angle	deg.	0-355			
Vertical Rotation Angle	deg.	22-90			
Alex Type	Single alex				
Braking Mode	Parking hand break + Overrun device				
Maximal Moving Speed	km/h	80			
Loading Dimensions(LxWxH)	mm	2300*1150*2500	2300*2300*2500	2500*2300*2500	2500*2300*2500
Expanding Dimensions(LxWxH)	mm	3400*3080*7200	3400*5280*7200	3400*6480*7200	4900*6480*7200
Net Weight	kg	900	1000	1200	1450
Loading Units	40HQ	10pcs	5pcs	5pcs	5pcs



Battery type: LFP

ECO Friendly & Low Emission, just great light, complete silence and fresh air.

HYBRID POWER LIGHTING TOWER

HBL Series

THE HYBRID LIGHTING TOWER IS EQUIPPED WITH
 4*150W LED LAMPS / 4*250W LED LAMPS
 / 4*350W LED LAMPS.

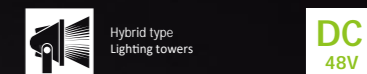


DC
LED
 LIGHTING TOWER

MAST
 UP TO
9 M

Technical data

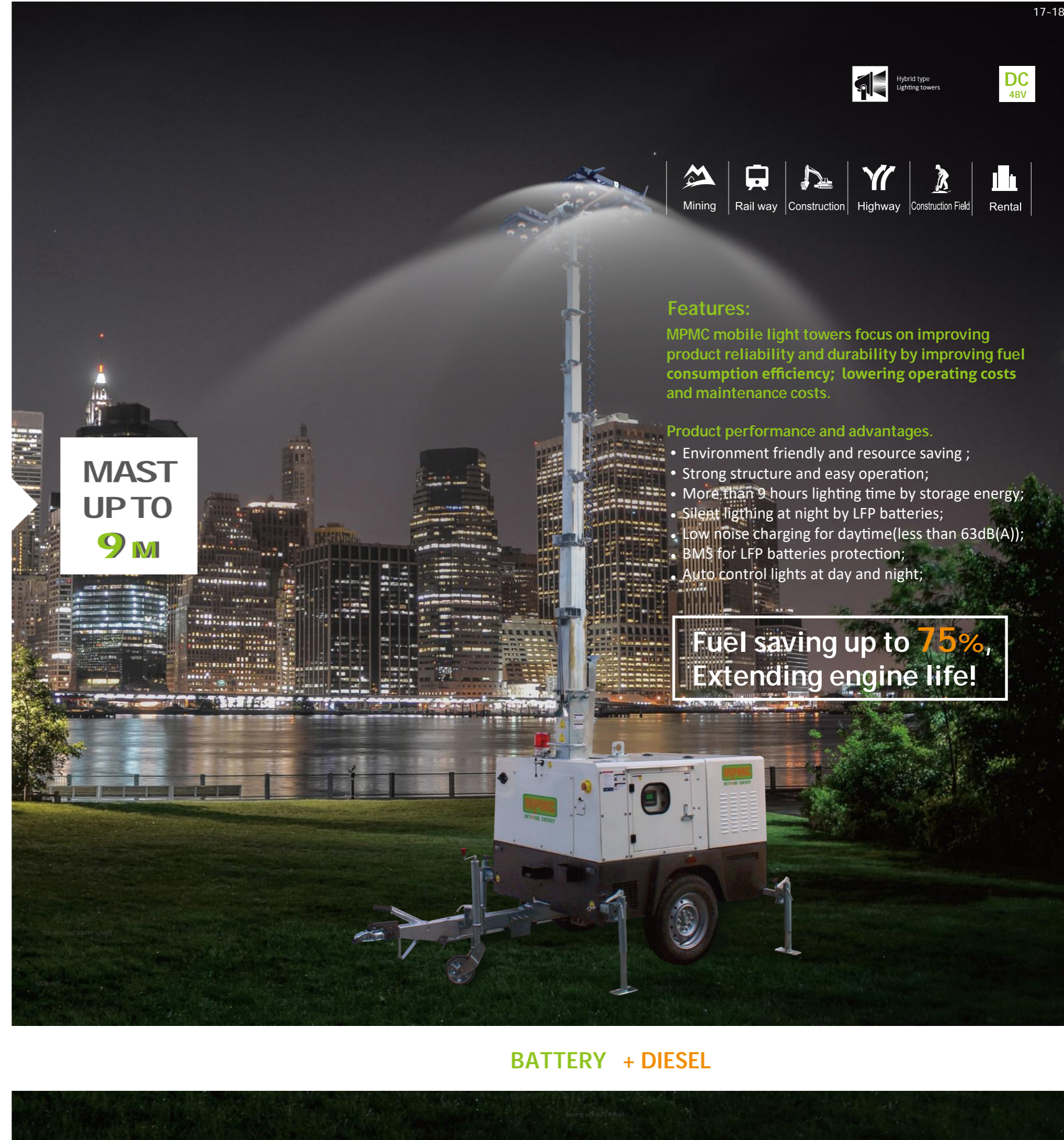
Model	MLT4KL-1400DHBL	MLT4YL-1400DHBL	MLT4KL-1000DHBL	MLT4YL-1000DHBL	MLT4KL-600DHBL	MLT4YL-600DHBL	
Discharge Duration	hr.	9.0		12.0		15.0	
Charge Duration	hr.		3.0			6.0	
Pack Dimension	mm	2234*1477*2557					
Net Weight	kg	1540			1500		
Fuel Capacity	L	100					
Control System		Automatic control (Lamp / Genset / battery)					
Lamp Power	W	350		250		150	
Luminous Efficiency	Lm/W	160		155		150	
Luminous Flux	Lm	56000		38750		22500	
Lamp Qty.	pcs	4		4		4	
Total Irradiation Area (Min.25lux,9m Mast)	m ²	3780		3159		2578	
Total Irradiation Area (Average220lux,9m Mast)	m ²	6400		4624		2352	
Battery Model		MF51300					
Nominal Capacity	kWh	15.36					
	Ah	300					
Nominal Voltage	VDC	51.2					
Battery Qty.	pcs	1					
Engine Model		Z482-ET03 (3000rpm)	2TNV70-HGE (3000rpm)	Z482-ET03 (3000rpm)	2TNV70-HGE (3000rpm)	Z482-B-CHN-1 (1500/1800rpm) Z482-D2-EF07e (1800rpm)	2TNV70HE (1500/1800rpm)
Alternator Model		MD6.0-48			MD3.0-48		
Genset Rated Power	KW	6			3		
Genset Voltage Range	VDC	50-60					
Mast Lifting Type		Vertical					
Lifting Height	m	9					
Driving Type		Hydraulic					
Horizontal Rotation Angle	deg.	349					
Vertical Rotation Angle	deg.	90					
Trailer Loading Capacity	kg	1600					
Alex Type		Single alex					
Tire Size		185R14					
Braking Mode		Parking hand break + Overrun device					
Running Speed	km/h	80					



Features:
 MPMC mobile light towers focus on improving product reliability and durability by improving fuel consumption efficiency; lowering operating costs and maintenance costs.

- Product performance and advantages.**
- Environment friendly and resource saving ;
 - Strong structure and easy operation;
 - More than 9 hours lighting time by storage energy;
 - Silent lighting at night by LFP batteries;
 - Low noise charging for daytime(less than 63dB(A));
 - BMS for LFP batteries protection;
 - Auto control lights at day and night;

**Fuel saving up to 75%,
 Extending engine life!**



BATTERY + DIESEL

The on road trailer speed

<80km/h

Saving up to 75% fuel

CASE STUDY



Lifter
 Rated power: 3*11kW
 Peak Power: 60kW
 Operation: 10h/day

Construction / Rental



10h/day running

GENSET + HBD® BESS

↓ **54.1%**
 Genset + HBD® Combo Fuel & CO₂ Reduction Ratio

32,314kg/CO₂
 12,240L

65kW
 Genset Average Output

81%
 Genset Average Load

Annual Potential Saving

■ Diesel + BESS
 Genset charges the BESS for 1 hour twice a day; BESS supply power for the Lifter. Fuel consumption is reduced 12,240L per year.
 Saving \$16,105/Year
 ROI in 2.6 Years



Tower crane
 Rated power: 45kW
 Peak Power: 133kW
 Operation: 10h/day with 2h @100% load, 1h @ 75% load, 2h @ 50% load, 3h @ 25%, 2h @0% load.

Construction / Rental



10h/day running

GENSET + HBD® BESS

↓ **37.9%**
 Genset + HBD® Combo Fuel & CO₂ Reduction Ratio

155,866kg/CO₂
 59,040L

158kW
 Genset Average Output

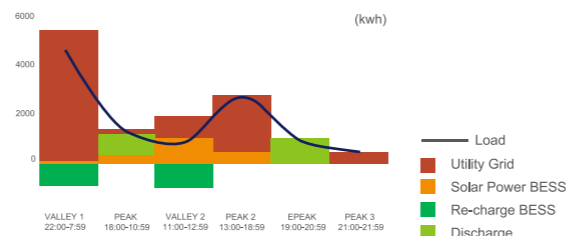
79%
 Genset Average Load

Annual Potential Saving

■ Diesel + BESS
 Genset charges the BESS for 1.5 hour twice a day; BESS supply power for the tower crane as the prime power. Fuel consumption is reduced 59,040L per year.
 Saving \$77,933/Year
 ROI in 1.6 Years



Self-Consumption
 Arbitrage Solution



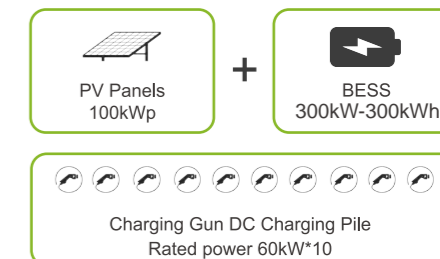
Location: South Australia
 Valley: \$0.056 USD/kWh
 Peak : \$0.1335 USD/kWh
 EPeak : \$0.1787 USD/kWh

**Saving \$164 USD/day,
 \$206,575 USD/year**

Period of ROI 1.6 Years



EV Charging
 Solar + BESS



Location: Chile
ONLY 2 hours to recharge

Valley: \$0.109 USD/kWh
 Peak: \$0.224 USD/kWh
 Shoulder: \$0.137 USD/kWh

Saving \$66,014 USD/year
Period of ROI 2 Years

MPMC HYBRID[®]

Hybrid Solutions

Integrated, reliable and customized renewable energy



Solar & Battery & Wind



Solar & Battery & Diesel/Gas Genset



Battery & Diesel/Gas Genset



Battery Power Bank (A series)



Battery Power Bank (R series)



Solar & Battery & Wind & Diesel/Gas Genset



Genset & Battery Hybrid Lighting Tower

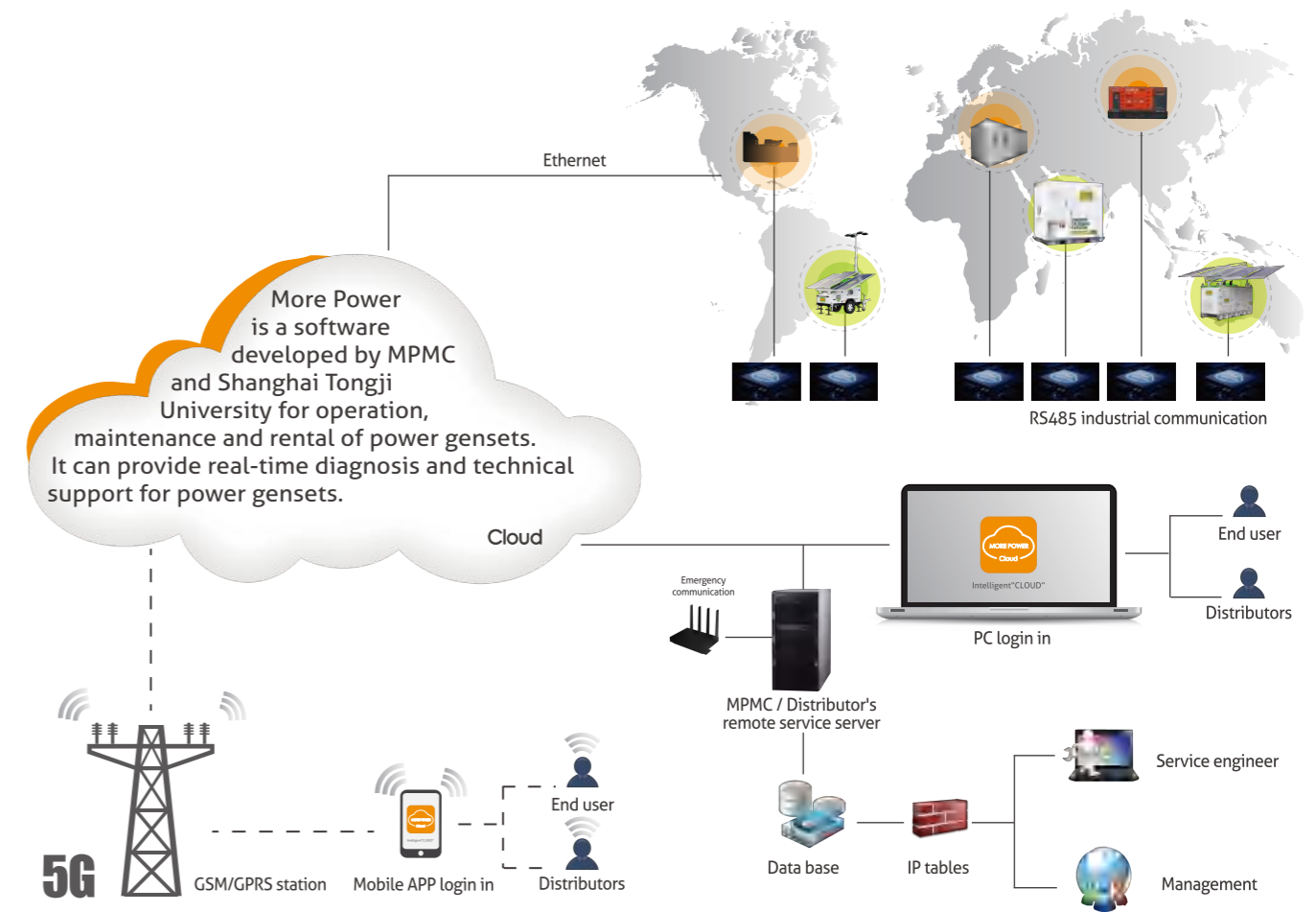


Solar & Battery Solar Lighting Tower



Battery cluster

Internet Intelligent "More Power" Remote Service System



- Support all the international branded controllers
- RS485 industrial communication
- GSM/GPRS network communication
- GPS satellite system

MPMC Cooperated with Tongli University and developed "More Power" cloud system which focused on the power solution systems health management for operation, maintenance and rental.

More Power system includes global intelligent remote control, hierarchical management, multi-language instant messaging, after-sales service, spare parts online orders and other types of data collection. It supports PC and mobile APP.

More Power can provide real-time diagnosis and timely technical support for customers in different countries and different industries.